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U.S. Foreign Waterborne Commerce and Vessels

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OMB Assigns Responsibility for the FWTSP to the Corps

FWTSP -- Foreign Waterborne Transportation Statistics Program

- Effective date: 1 October 1998
- Corps now produces trade-based products
- User workshops conducted
- QA/QC studies performed to assess data sources
- WCSC decides to use manifest data as primary cargo data source beginning with calendar year 2000 data

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U.S. Foreign Waterborne Data Sources

- **Census** NETS
  - imports / exports
  - trade based
- Port Import Export Reporting Service (**PIERS**)
  - imports / exports/ in-transits
  - manifest based transportation data
- **Customs** vessel entrances / clearances (VM)

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Waterborne In-Transit Cargo Movements

Definition: Cargo moving in-bond through the U.S. from one foreign country to another foreign country via a U.S. coastal port

- **Inbound:** Customs 7512 Form, Transportation Entry and Manifest of Goods Subject to Customs Inspection and Permit, or Customs Automated Manifest System (AMS)
- **Outbound:** USACE 7513 Form, Shipper's Export Declaration for In-transit Goods
- Included in the **PIERS** database from AMS and Bills of Lading

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Factors Influencing Published Statistics

- **Data sources**
  trade or manifest (transportation) based
- **Time frame**
  statistical month or vessel movement month
- **Data gaps**
  in-transits, LOOP, Virgin Islands
- **Value added**
  cargo matched to vessel movements
- **Fields captured**
  dollar value, loaded container

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Key Foreign Data Elements

Element	Use
Foreign port	Trade route, voyage costs
U.S. channel	Corps project specificity
Vessel name	Vessel class and size;
channel	dimensions and analysis
Vessel operating draft	Total tons on vessel; channel depth benefit / cost analysis
Commodity type, quantity and value	Supply / demand (present and future)
Imports, exports, and in-transits	All cargo using the channels

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Why Switch to PIERS as Primary Data Source

- Meets overall **coverage** for essential Corps data needs
- Better **geographic accuracy**
- **Higher match rate** to vessel movement data
- Includes **in-transit** movements
- **Container** information
- **Reefer** and **RoRo** cargo identification

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Match Rate to Vessel Moves for Calendar Year 2003 Data

- Trade-based (**Census**)
  - Imports: 83% weight 85% records *
  - Exports: 64% weight 80% records
- Manifest-based (**PIERS**)
  - Imports: 98% weight 98% records
  - Exports: 99% weight 98% records
- **Integrated** processed Corps database
  - Imports: 92% weight 98% records
  - Exports: 98% weight 98% records

(* i.e. 83% of the total cargo weight and 85% of the total cargo records were matched to a vessel movement)

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PIERS
Port Import Export Reporting Service

- Manifest based **transportation** data
  - AMS source of imports / inbound in-transits
  - Bills of Lading source of exports / outbound in-transits
- **Primary source** of the U.S. foreign waterborne transportation statistics
- **Monthly** downloads
- Detail data available to Corps or to others who have a **contract with PIERS**

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Key PIERS Data Elements

- foreign country of origin / destination
- foreign port of lading / unlading
- foreign port of lading / unlading for in-transits
- shipper / exporter
- consignee / importer
- quantity
- unit of measure
- U.S. port of unlading / lading
- inland U.S. origin / destination
- commodity
- weight
- vessel name
- sailing / arrival date
- Customs manifest #
- teus
- container size
- container quantity

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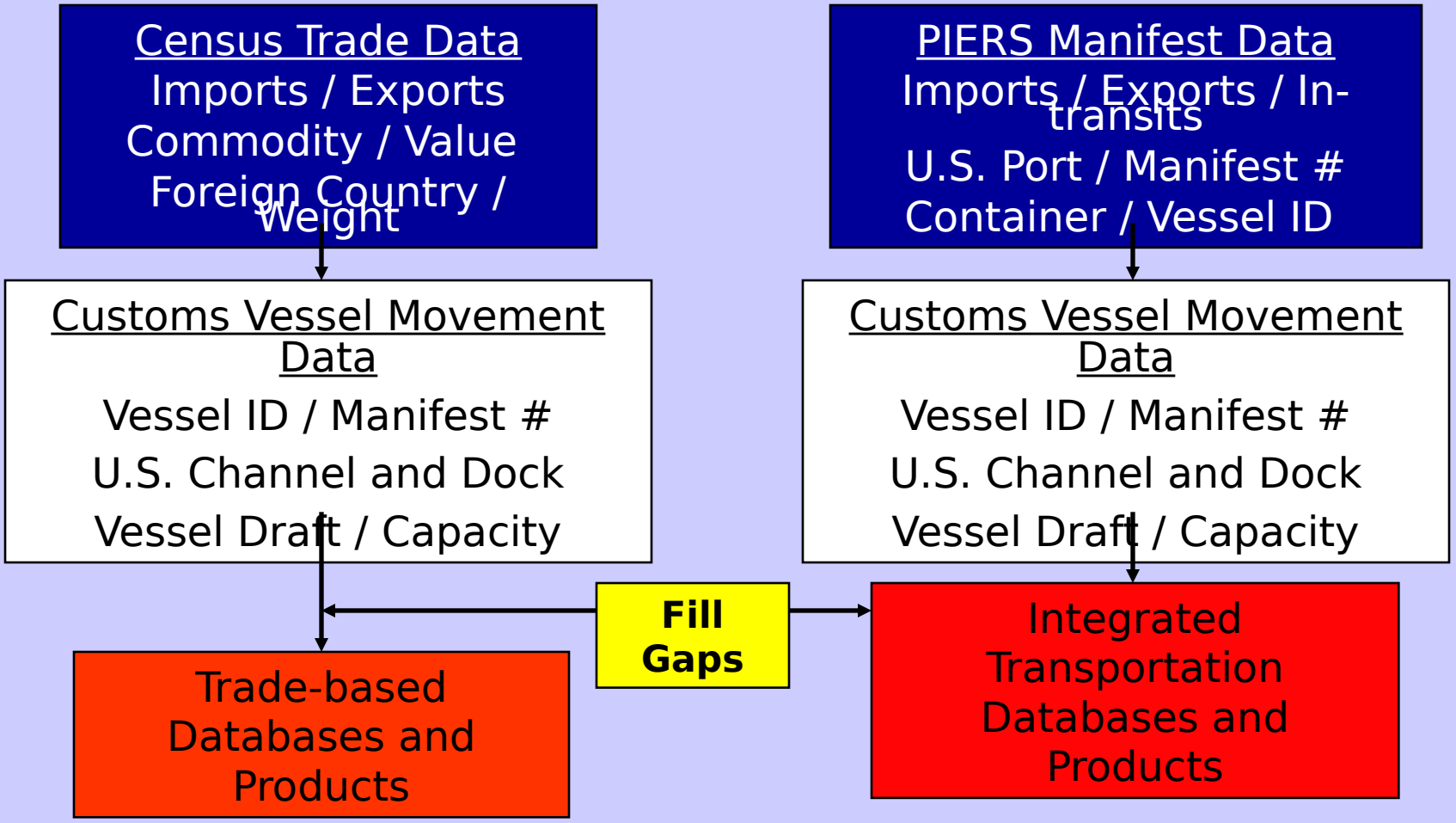
Current U.S. Foreign Waterborne Transportation Processing



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Historical Trends

NOTE: Source of foreign waterborne commerce statistics changed from trade based data to manifest based data with the 2000 data year

You should not change from trade-based data to manifest-based data when analyzing trends. There will be a data source jump that does not reflect reality.

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Availability

The official foreign waterborne transportation statistics generated from the integrated database are available:

- **Fiscal year** (FY) quarterly preliminary data on Corps intranet - 7 months (FY2004 by March 2005)
- **Calendar year** (CY) **annual preliminary** data - 9 months (CY2004 by September 2005)
- **CY annual final** data – 11 months (CY2004 by November 2005)

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U.S. Foreign Waterborne Commerce

- Utilizes all data sets – Census, CBP, PIERS, Ports
- Integrated with domestic data
- Geographically specific to the channel and dock level (Customs Port not specific enough)
- Geographically detailed files produced for Federal budget purposes on both a FY and CY basis (confidential)
- Annual public summary files based on this information:
  - Data files
  - Published books and other summary tables
  - Concordances (eg. waterborne codes to hazmat codes)

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www.iwr.usace.army.mil/ndc

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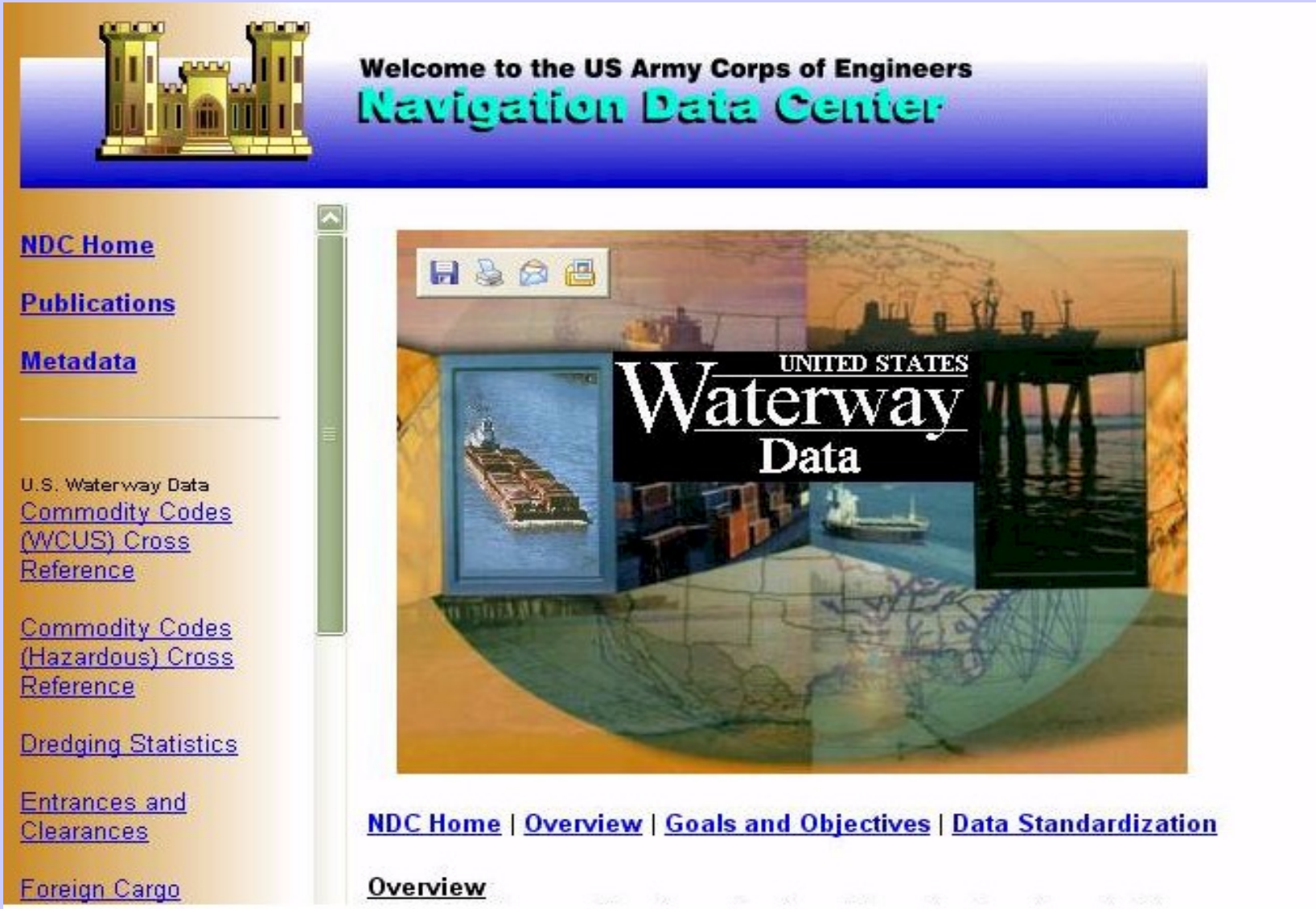
www.iwr.usace.army.mil/ndc/data/data1.htm



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Recent Enhancements to Integrated Public Use File of U.S. Foreign Waterborne Commerce

- **Coverage**: Cargo flows between U.S. ports / waterways and foreign ports
- Calendar years 2000 - 2003
- **Added data fields** include:
  - U.S. waterway (origin/destination, if not U.S. port)
  - State of U.S. port (origin/destination)
  - Foreign country of origin / destination of commodity
  - In-transit foreign country of origin / destination
  - U.S. coastal region

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U.S. Foreign Waterborne Container Data

- Source: **PIERS**
- Acquisition began with calendar year 2000 data
- Container flagged cargo records include
  - **Container size** (includes less than a container)
  - **Number of containers**
  - **Teus**

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Top 10 U.S. Container Ports
(Ranked by Loaded TEUS[1])

U.S. Waterborne Container Traffic in 2002 (Loaded and Empty TEUS)

	Domestic					Foreign			Grand
Port	Inbound		Outbound		Total	Inbound	Outbound	Total	Total
	Loaded	Empty	Loaded	Empty		Loaded	Loaded		Loaded
Los Angeles, CA	48,160	82,470	124,764	12,538	267,932	3,020,475	843,652	3,864,127	4,037,051
Long Beach, CA	532	0	83,987	0	84,518	2,613,222	745,811	3,359,033	3,443,551
New York, NY and NJ	97,498	18,497	128,663	18,497	263,155	1,878,628	762,762	2,641,390	2,867,551
Charleston, SC	952	2,992	2,983	2,048	8,975	674,148	535,494	1,209,642	1,213,577
Oakland, CA	58,773	50,054	156,445	6,113	271,384	476,053	474,081	950,134	1,165,352
Norfolk Harbor, VA	68,405	7,140	58,941	945	135,431	550,186	444,401	994,587	1,121,933
Tacoma, WA	47,521	223	221,833	40	269,617	489,552	278,144	767,696	1,037,049
Savannah, GA	3,743	9,643	5,559	1,320	20,264	561,212	460,428	1,021,640	1,030,942
Seattle, WA	29,775	57,620	90,545	10,349	188,289	510,535	340,642	851,177	971,497
Houston, TX	29,944	4,165	40,046	10,384	84,538	416,048	435,015	851,063	921,052
Total All Ports	1,505,656	338,042	1,505,656	338,042	3,687,396	12,874,529	6,803,798	19,678,327	22,689,639

[1] TEU = Twenty Foot Equivalent Units

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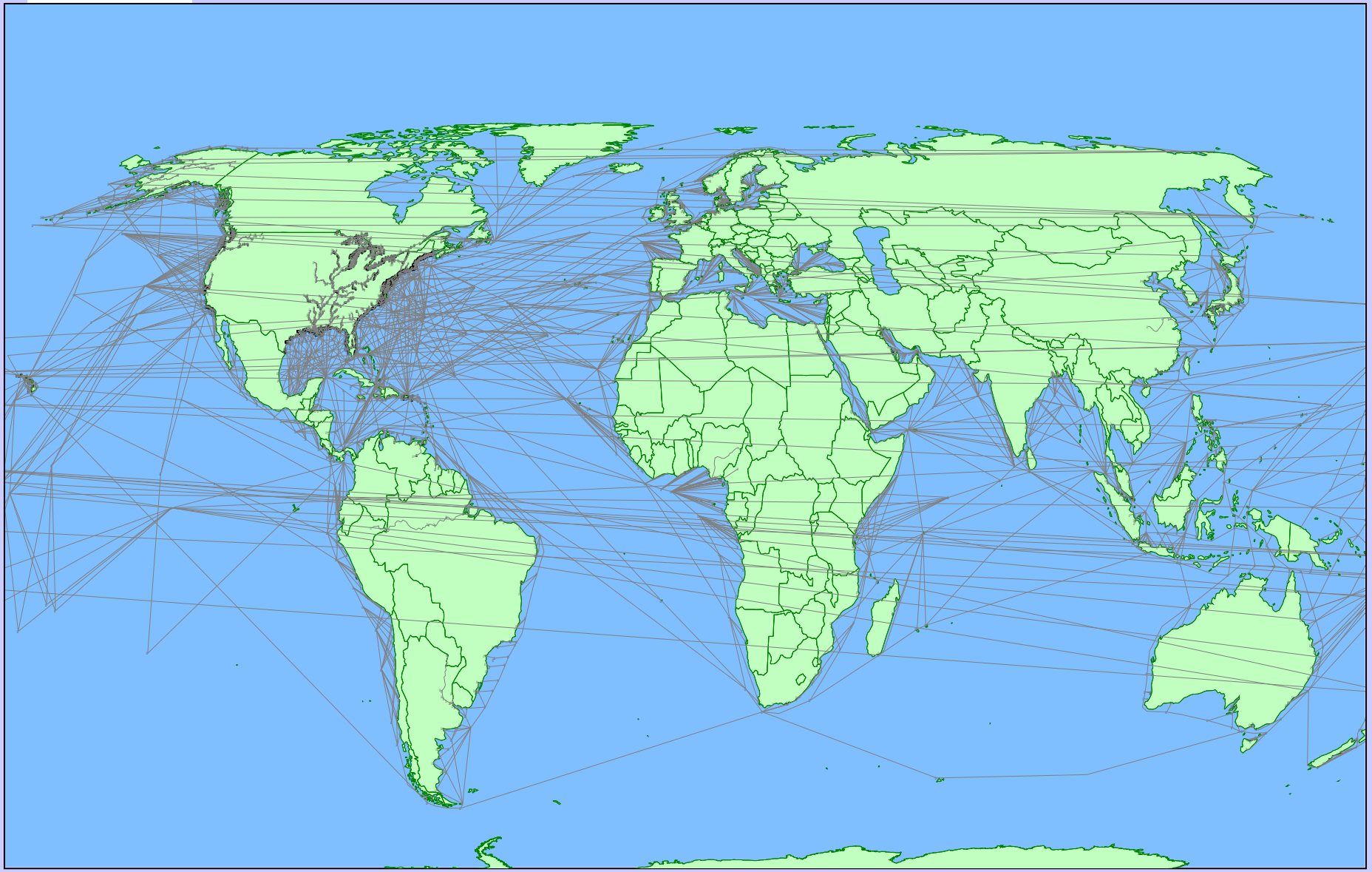
New Foreign Cargo Flow Product

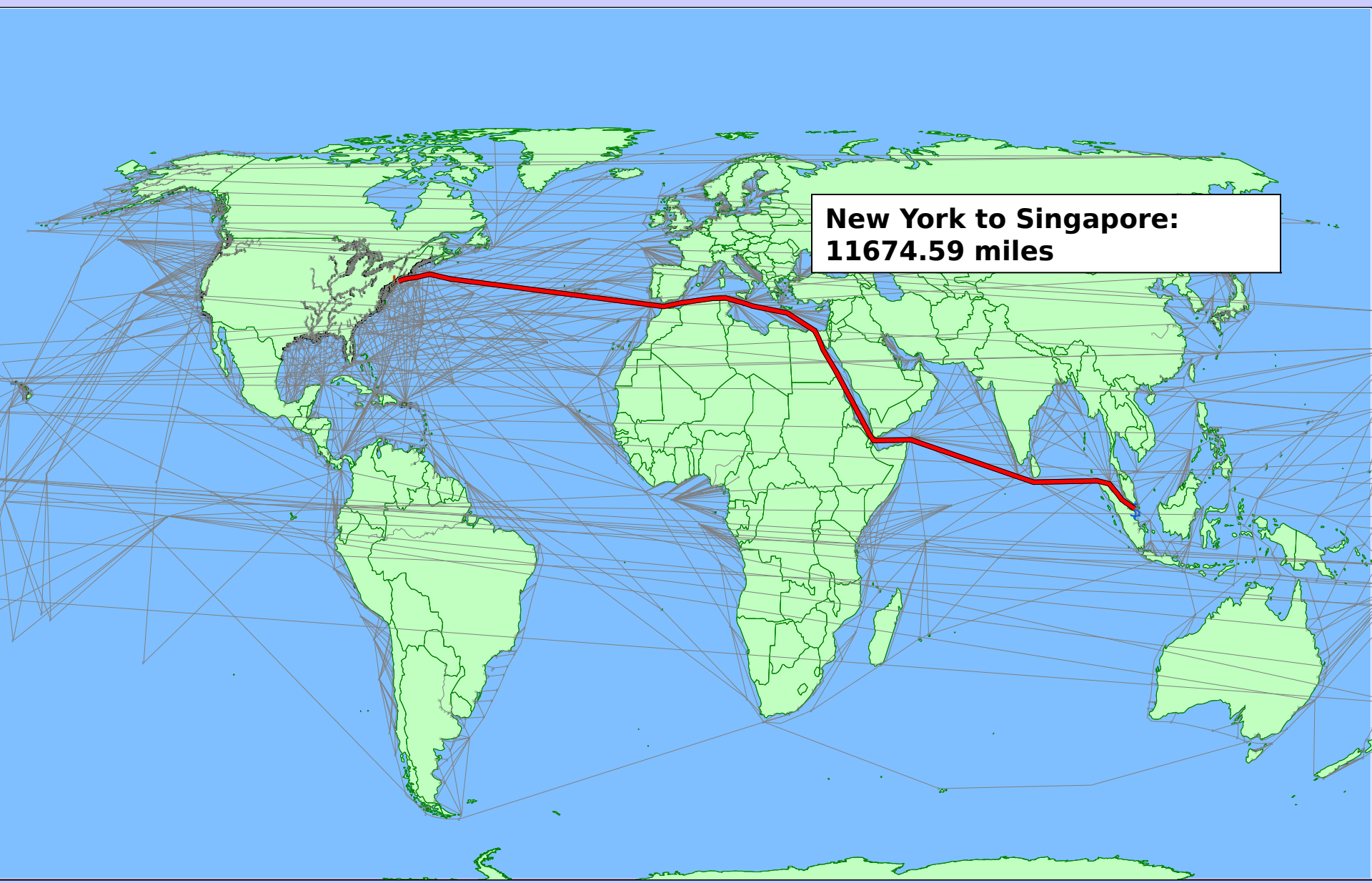
Development of new system to report maritime cargo flows between U.S. ports and foreign ports, countries or regions

- **Port-to-port trip distances** database
- Inbound / Outbound **foreign ton-miles**
- **GIS navigation network** to allow routing of moves between U.S. and foreign ports



Entire International Network (joined with NWN)

Note: links appear to cross land due to projection of entire globe in 2 dimensions)



Routing Results

Vanderbilt Center for Transportation Research

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U.S. to Foreign Port Distance Table

USPort	USPort Name	Schedule K	Foreign Port Name	Ctry	Country Name	Distance Kilometers
4120	Los Angeles Harbor, CA	12493	Vancouver, BC	1220	Canada	2149.45
3924	Duluth-Superior Harbor, MN and WI	13841	Halifax, NS	1220	Canada	3988.99
0700	Baltimore, MD	47031	Algeciras	4700	Spain	6254.93
0700	Baltimore, MD	41251	Liverpool	4120	United Kingdom	6458.64
2136	San Juan Harbor, PR	41251	Liverpool	4120	United Kingdom	6842.98
0149	Port of Boston, MA	40534	Porvoo	4050	Finland	7763.39
0398	Port of New York, NY and NJ	40532	Koverhar	4050	Finland	7939.67
0552	Philadelphia, PA	40571	Rauma	4050	Finland	8368.25
0700	Baltimore, MD	40525	Helsinki	4050	Finland	8433.02
0700	Baltimore, MD	40500	All Other Finland Ports	4050	Finland	8790.32
0776	Savannah Harbor, GA	40527	Inga	4050	Finland	9188.83
0776	Savannah Harbor, GA	40531	Ouleborg	4050	Finland	9724.76
0776	Savannah Harbor, GA	40543	Kemi	4050	Finland	9747.66
0398	Port of New York, NY and NJ	12493	Vancouver, BC	1220	Canada	11271.31
2012	Houston, TX	40571	Rauma	4050	Finland	11444.38
2012	Houston, TX	40551	Mantyluoto	4050	Finland	11480.57
3924	Duluth-Superior Harbor, MN and WI	40552	Naantali	4050	Finland	11778.74
2012	Houston, TX	40535	Raahe	4050	Finland	11889.09
3924	Duluth-Superior Harbor, MN and WI	40549	Kotka	4050	Finland	11970.60
4120	Los Angeles Harbor, CA	40549	Kotka	4050	Finland	16438.48

1 mile = 1.6093 kilometers

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U.S. Exports to Finland
Calendar Year 2003

Corps Port	U.S. Port	Schedule K	Finland	Distance (Kilometer)	Tonnage (Metric)	MetricTon Kilometers
0700	Baltimore, MD	40527	Inga	8384.77	65,769	551,456,945
0776	Savannah, GA	40527	Inga	9188.83	24,448	224,648,236
2416	Port Arthur, TX	40527	Inga	11304.98	30,062	339,846,730
					120,279	**1,115,951,911**
0398	Port of New York, NY and NJ	40534	Porvoo	8073.10	**158,968**	**1,283,361,644**
0736	Newport News, VA	40535	Raahe	8925.71	102,297	913,073,328
0744	Elizabeth River, VA	40535	Raahe	8915.36	97,305	867,506,724
					199,602	**1,780,580,052**
0398	Port of New York, NY and NJ	40571	Rauma	8018.43	27	218,228
0700	Baltimore, MD	40571	Rauma	8415.45	5	38,172
0736	Newport News, VA	40571	Rauma	8480.99	364	3,085,257
0773	Charleston, SC	40571	Rauma	9091.77	53	478,384
0776	Savannah, GA	40571	Rauma	9219.50	136,489	1,258,362,099
					136,937	**1,262,182,141**
	Other U.S. to Finland				**227,285**	**2,347,252,158**
	Total U.S. to Finland				**843,071**	**7,789,327,905**

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U.S. Imports from Finland Calendar Year 2003

Corps Port	U.S. Port	Schedule K	Finland	Distance (Kilometers)	Tonnage (Metric)	Metric Ton Kilometers
0552	Philadelphia. PA	40543	Kemi	8896.40	101.394	902.045.068
0398	Port of New York. NY and NJ	40543	Kemi	8546.59	119	1.015.697
2012	Houston. TX	40549	Kotka	11574.52	40.064	463.726.303
3701	Green Bay. WI	40549	Kotka	11518.61	18.339	211.239.000
3793	Menominee. MI	40549	Kotka	11548.92	69.251	799.769.996
0298	Penn Manor. PA	40549	Kotka	8546.90	5.673	48.483.839
0552	Philadelphia. PA	40549	Kotka	8498.39	181.432	1.541.876.267
0398	Port of New York. NY and NJ	40549	Kotka	8148.59	21	170.024
0149	Boston. MA	40534	Porvoo	7763.39	13.029	101.150.167
2012	Houston. TX	40534	Porvoo	11499.04	7.422	85.343.077
0398	Port of New York. NY and NJ	40534	Porvoo	8073.10	396.425	3.200.377.148
0191	Providence River and Harbor. RI	40534	Porvoo	7866.98	67.576	531.619.010
0700	Baltimore. MD	40571	Rauma	8415.45	554.526	4.666.584.457
2420	Brownsville. TX	40571	Rauma	11523.65	4.700	54.163.139
0773	Charleston. SC	40571	Rauma	9091.77	35.026	318.447.090
2012	Houston. TX	40571	Rauma	11444.38	70.891	811.301.667
2017	Jacksonville. FL	40571	Rauma	9407.47	153.274	1.441.920.909
0552	Philadelphia. PA	40571	Rauma	8368.25	23.317	195.119.915
0398	Port of New York. NY and NJ	40571	Rauma	8018.43	90	720.153
2253	Port of South Louisiana. LA	40571	Rauma	11076.84	22.370	247.784.457
2136	San Juan. PR	40571	Rauma	9014.90	8	73.604
2021	Tampa. FL	40571	Rauma	10244.39	14.431	147.834.010
	Other U.S. Imports from Finland				366.872	3.602.066.942
	Total U.S. Imports from Finland				**2.146.250**	**19.372.831.940**